



THE PRODUCT SUPPORT MANAGER: ACHIEVING SUCCESS IN EXECUTING LIFE CYCLE MANAGEMENT RESPONSIBILITIES

 **Bill Kobren**

In October 2009, President Barack Obama signed the Fiscal Year 2010 National Defense Authorization Act. The legislation (Pub. L. 111-84) contained a provision in Section 805 entitled, “Life Cycle Management and Product Support” requiring: (1) that the Secretary of Defense issue comprehensive guidance on Life Cycle Management (LCM), and the development and implementation of product support strategies for major weapon systems; (2) that each major weapon system be supported by a Product Support Manager (PSM); and (3) that each PSM position be performed by a properly qualified member of the armed forces or full-time employee of the Department of Defense. This article examines the intent, importance, and implications of this provision, and offers recommendations for implementation.

Keywords: *Life Cycle Management (LCM), Performance Based Logistics (PBL), Product Support Manager (PSM), Product Support Integrator (PSI), Life Cycle Logistics (LCL)*

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE APR 2010		2. REPORT TYPE		3. DATES COVERED 00-00-2010 to 00-00-2010	
4. TITLE AND SUBTITLE The Product Manager: Achieving Success in Executing Life Cycle Management Responsibilities			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Defense Acquisition University,9820 Belvoir Road ,Fort Belvoir,VA,22060			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 23	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Product
SUPPORT
Managers



And Public Law 111-84

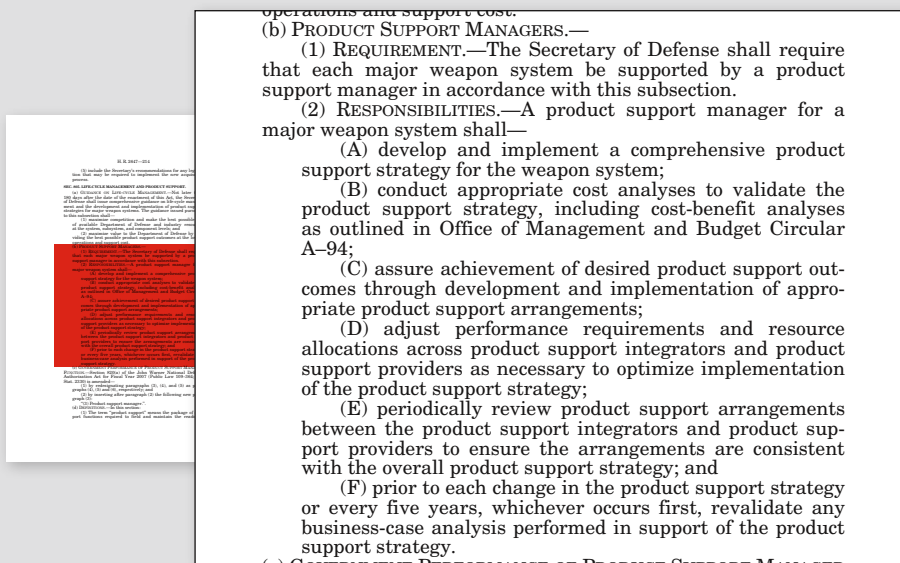
The Secretary of Defense shall require that each major weapon system be supported by a product support manager..." to "maximize value to the Department of Defense by providing the best possible product support outcomes at the lowest operations and support cost. (NDAA, 2009a, p. 214)

Supporting and sustaining the weapons with which we defend our nation is as old as and indeed pre-dates the establishment of this republic. Yet, as we move beyond the first decade of the 21st century, technology has advanced to the point where weaponry is not only expensive to develop, acquire, operate, sustain, and maintain, but managing the processes and information, and resourcing these tasks have grown commensurately in complexity.

While both the Department of Defense (DoD) and the individual Services each have long-established, well-refined, and detailed processes, policies, and procedures in place to oversee product support management, the processes, titles, responsibilities, and authority vested in the individual charged with ensuring mission-ready, available, and reliable systems have remained fragmented—until now.

The Fiscal Year 2010 National Defense Authorization Act (FY2010 NDAA) was signed into law by President Barack Obama on October

FIGURE 1. STATUTORY LANGUAGE CONTAINED IN SECTION 805 OF THE FY2010 NDAA REGARDING THE NEW PRODUCT SUPPORT MANAGER (PSM)



28, 2009 (Pub. L. 111-84). Included within the Act is a significant set of legislative provisions that modify DoD procurement policies and practices, particularly § 805, “Life Cycle Management and Product Support” (NDAA, 2009a) (Figure 1).

The law specifically requires (1) that the Secretary of Defense issue comprehensive guidance on *Life Cycle Management (LCM)*, and the development and implementation of product support strategies for major weapons systems; (2) that each major weapon system be supported by a *Product Support Manager (PSM)*; and (3) that each PSM position be performed by a properly qualified member of the armed forces or full-time employee of the DoD (NDAA, 2009b).

Why Mandating a PSM Matters

Changes legislated by the FY2010 NDAA will usher in an era of better performing weapon systems for 21st century warfighters. At least a dozen important benefits result, collectively serving as a basis for better managing LCM responsibilities. The new legislation:

FOCUSES ON DESIRED PERFORMANCE OUTCOMES

First and foremost, the 2009 legislation reiterates commitment by Congress and three presidential administrations to outcome-based weapons systems support and sustainment strategies—a focus that dates back to and even prior to the issuance of the seminal April 1998 Section 912(c) report entitled, “Actions to Accelerate the Movement to the New Workforce Vision” (DoD, 1998). This report was published by then-Secretary of Defense William Cohen in response to the FY1998 NDAA. The desired end state, both then and today, is simple to articulate and remarkably challenging: to attain the highest possible readiness at the most optimal cost (A. Estevez, personal communication, November 30, 2009). LCM and formal establishment of a PSM are two important means of achieving both.

REDUCES PRODUCT SUPPORT COSTS

Weapon system product support costs the DoD approximately \$132 billion annually (DoD, 2009a, p. 3), a considerable sum of money by any measure, and a significant portion of the defense budget otherwise unavailable for investment elsewhere in research and development or procurement of new systems. Thus, as the Air Force so aptly articulates, “The primary focus is to optimize life cycle customer support and achieve optimum system availability at the lowest total ownership cost. The life cycle focus on weapon system sustainment cost dictates a seamless, integrated, continuing process to assess and improve product support strategies”

(Department of the Air Force, 2009a). Easier said than done; short of major technological breakthroughs, such outcomes are generally achieved through rigorous application of systems engineering processes, designing with supportability in mind, long-term sustainment planning, aggressive root cause analysis and failure resolution, proactive obsolescence and Diminishing Manufacturing Sources and Material Shortages (DMSMS) mitigation, planned technology upgrades, and perhaps most important of all, a constant focus on system Reliability, Availability, and Maintainability (RAM). An unwavering commitment to LCM principles and practices is therefore an essential prerequisite of life-cycle cost containment.

SUPPORTS ACHIEVEMENT OF KEY DEPARTMENTAL PRIORITIES

In the February 2010 Quadrennial Defense Review (QDR) Report, the Department of Defense reiterated its commitment to acquisition excellence, life-cycle management, outcome-focused sustainment, and public-private partnering by unequivocally stating, “Beyond ensuring that acquisition efforts begin on the right track, the Department must also continue to strengthen the execution phase of weapons development programs... [to] achieve effective life cycle cost management by employing readiness-based sustainment strategies, facilitated by stable and robust government-industry partnerships” (Department of Defense, 2010, pp 78-79). Together, establishment of the PSM position, reiteration of DoD commitment to performance-based sustainment strategies, and establishment of well understood, clearly defined PSM roles, responsibilities, and expectations combine to facilitate fulfillment of the readiness outcomes articulated in the 2010 QDR (Department of Defense, 2010).

SUPPORTS THE PROGRAM MANAGER

“The (law) will ensure that the PSM role is ‘clearly designated’ within the program offices...bringing the many roles tied to life cycle support under one position” (Munoz, 2009). By policy, the PM is the LCM: “The PM shall be the single point of accountability for accomplishing program objectives for total life-cycle systems management, including sustainment. PMs shall consider supportability, life-cycle costs, performance, and schedule comparable in making program decisions” (DoD, 2007, p. 10). However, PMs cannot fulfill this role alone. In fact, “perhaps no management job in DoD is more demanding. Although the PM is responsible for life cycle support, he can delegate authority to the PSM and now we have doubled the leadership power within the government to effectively accomplish both front- and back-end attention to sustainment” (R. Fowler, personal communication, November 30, 2009). PMs pursue two primary objectives. First, the weapons system should be designed, maintained, and modified to continuously reduce the demand for logistics. Second, logistics support

must be effective and efficient. The resources required to provide product support must be minimized while meeting warfighter needs (Defense Acquisition University, 2005). Establishment of a formal PSM therefore enhances a PM's ability to execute their LCM responsibilities by more clearly defining the duties of a key staff member.

FACILITATES LIFE CYCLE MANAGEMENT

As part of their LCM responsibilities, PMs are charged with identifying, developing, and implementing weapon system product support and sustainment strategies. Specifically, "PMs shall develop and implement *Performance Based Logistics (PBL)* strategies that optimize total system availability while minimizing cost and logistics footprint" (DoD, 2007, p. 7). Moreover, "life-cycle sustainment planning and execution seamlessly span a system's entire life cycle, from Materiel Solution Analysis to disposal. It translates force provider capability and performance requirements into tailored product support to achieve specified and evolving life-cycle product support availability, reliability, and affordability parameters" (DoD, 2008a, p. 28). LCM is therefore about integration, optimization, leveraging capabilities, and achieving readiness, and is clearly not a solo endeavor. The PM requires a capable, empowered, and well-trained team to successfully execute this responsibility.

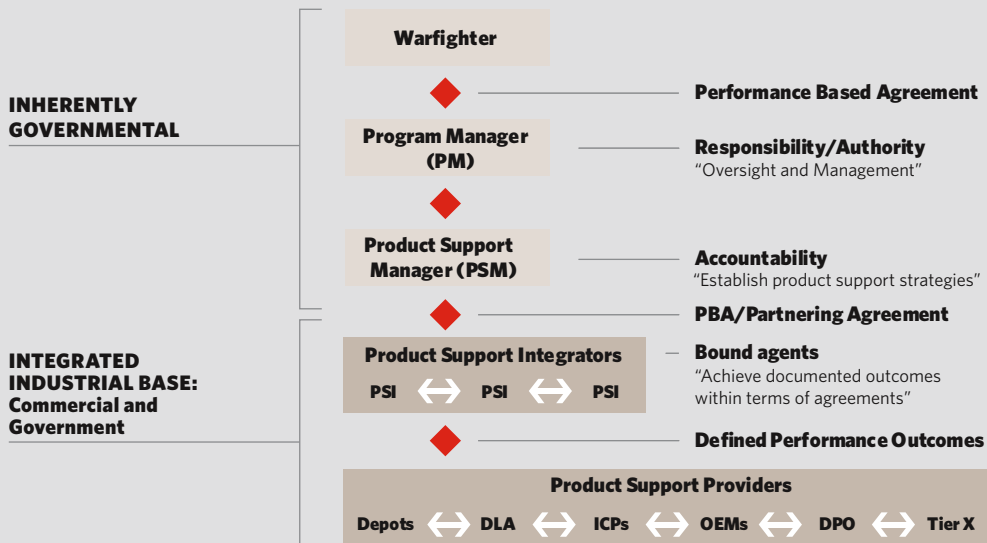
CLEARLY DELINEATES INHERENTLY GOVERNMENTAL FUNCTIONS

"The statute satisfied congressional concerns that in some instances inherently governmental functions were being performed by commercial entities. The language clearly identifies the PSM as the performer of those inherently governmental functions" (A. Estevez, personal communication, November 30, 2009), enhancing government oversight (Figure 2) of product support strategy implementation (Figure 3).

HELPS ACHIEVE LONG-TERM BEST VALUE OUTCOMES

In formally establishing the PSM, Congress reiterated its commitment to weapons systems performance outcomes and life-cycle cost optimization. It also made it abundantly clear that in PBL arrangements, both government and industry entities can serve as product support integrators. Thus, a "clear objective of both Congress and the administration was achieved, namely to maximize competition," and in so doing, also ensuring "long-term best value sustainment strategies that bring a balance between readiness and cost" (A. Estevez, personal communication, November 30, 2009).

FIGURE 2. PRODUCT SUPPORT BUSINESS MODEL



(Source: Fowler, 2009b)

FIGURE 3. WHAT THE PRODUCT SUPPORT INTEGRATOR (PSI) MUST DRIVE AND INTEGRATE



(Source: Fowler, 2009a)

ESTABLISHES CLEAR LINES OF AUTHORITY

Product Support Integration (PSI) is something industry does well, and the Section 805 language allows continued reliance on industrial sustainment integrators. But government organizations can certainly step up and become integrators as well, often in outcome-based partnering strategies with industry providers. In a PBL product support arrangement, “the PSM (acting on behalf of the PM) incorporates the appropriate needs and constraints in agreements with PSIs. They, in turn, ensure that the necessary performance requirements to meet their agreements are properly passed to the lower tier Product Support Providers (PSP), who accomplish the product support activities” (DoD, 2009b, p. 35).

CLEARLY ARTICULATES ROLES AND RESPONSIBILITIES

Although weapon system product support management has been somewhat fragmented in terms of duty titles, specific responsibilities, and individual authority of those charged to deliver it, DoD has long recognized the importance of a PSM. “We’ve been doing this all along; the intent by clarifying roles and responsibilities is to drive it into the DNA of the program office” (A. Estevez, personal communication, November 30, 2009). Indeed, the *Defense Acquisition Guidebook*, published well before the FY2010 NDAA was signed, specifically outlines PSM responsibilities: “The day-to-day oversight and management of the product support functions are typically delegated to a product support manager...who leads the development and implementation of the performance-based product support strategy and ensures achievement of desired support outcomes. The product support manager, while remaining accountable for system performance, can delegate responsibility for delivering specific outcomes. In doing so, the PM and PSM may employ any number of...support integrators to integrate support from all support sources to achieve the performance outcomes specified in a (PBL) performance-based agreement” (DoD, 2009c, pp. 19-20). Regardless, “the PSM will not be the program manager. It will probably be someone with sustainment or logistics competencies [and] certifications at a given level” (Munoz, 2009) (Figure 4).

STANDARDIZES TERMINOLOGY

The military services use a variety of terms and titles for the PSM, of which the statute only highlighted a few. Not only does this terminology mix tend to be confusing, it risks an “apples to oranges” comparison of duties, responsibilities, and authorities granted to the individuals assigned to these positions, particularly in joint programs. In this instance, standardization of terminology will likely be a welcome, if not overdue change for the acquisition and sustainment community (Air Force, Army, Navy, and Marine

FIGURE 4. FY2010 NATIONAL DEFENSE AUTHORIZATION ACT (NDAA), SECTION 805 DEFINITIONS

(d) DEFINITIONS.—In this section:

(1) The term “product support” means the package of support functions required to field and maintain the readiness and operational capability of major weapon systems, subsystems, and components, including all functions related to weapon system readiness.

(2) The term “product support arrangement” means a contract, task order, or any type of other contractual arrangement, or any type of agreement or non-contractual arrangement within the Federal Government, for the performance of sustainment or logistics support required for major weapon systems, subsystems, or components. The term includes arrangements for any of the following:

- (A) Performance-based logistics.
- (B) Sustainment support.
- (C) Contractor logistics support.
- (D) Life-cycle product support.
- (E) Weapon systems product support.

(3) The term “product support integrator” means an entity within the Federal Government or outside the Federal Government charged with integrating all sources of product support, both private and public, defined within the scope of a product support arrangement.

(4) The term “product support provider” means an entity that provides product support functions. The term includes an entity within the Department of Defense, an entity within the private sector, or a partnership between such entities.

(5) The term “major weapon system” has the meaning given that term in section 2302d of title 10, United States Code.★

SEC. 806. TREATMENT OF NON-DEFENSE AGENCY PROCUREMENTS

★ Includes, but is not limited to, Major Defense Acquisition Programs (MDAP). Title 10 U.S.C. 2302d defines a major weapon system as a system for which the Department of Defense is responsible if total expenditures for research, development, test, and evaluation for the system are estimated to be more than \$115,000,000 (based on fiscal year 1990 constant dollars); or the eventual total expenditure for procurement for the system is estimated to be more than \$540,000,000 (based on fiscal year 1990 constant dollars).

Because 10 U.S.C. 2430 defines an MDAP as a DoD acquisition program that is not a highly sensitive classified program and is designated as a major defense acquisition program; or that is estimated to require an eventual total expenditure for research, development, test, and evaluation of more than \$300,000,000 (based on fiscal year 1990 constant dollars) or an eventual total expenditure for procurement of more than \$1,800,000,000 (based on fiscal year 1990 constant dollars), MDAPs can therefore be considered major weapon systems.

Notes:

1: See also DoD Instruction 5000.02, Enclosure 3, Table 1 (DoD, 2008a) for related descriptions and decision authorities for Acquisition Category (ACAT) I–III programs, including MDAPs.

2: USD AT&L “Directive-Type Memorandum (DTM) 09-027 (DoD, 2009a) revised the DoDI 5000.02 definition of an MDAP to: “a DoD acquisition program that is not a highly sensitive classified program and (1) that is designated by the USD(AT&L) as a MDAP; or (2) that is estimated to require an eventual total expenditure for research, development, test, and evaluation, INCLUDING ALL PLANNED INCREMENTS, of more than \$365 million (based on fiscal year 2000 constant dollars) or an eventual total expenditure for procurement, INCLUDING ALL PLANNED INCREMENTS, of more than \$2.19 billion (based on fiscal year 2000 constant dollars).”

Corps Representatives to the DoD Life Cycle Logistics Functional Integrated Process Team [FIPT], personal communications, November 13-24, 2009; Department of the Air Force, 2009b). Some current titles include the following:

- The Air Force generally uses *Director of Logistics (DOL)* terminology in their acquisition product centers and *System Sustainment Manager (SSM)* for programs in sustainment.
- The Navy uses terms such as *Director of Logistics*, *Assistant Program Manager for Logistics (APML)*, and *Deputy Assistant Program Manager for Logistics (DAPML)*.
- The Marine Corps uses several terms for logistics leadership in a program office, including *Program Management Team Life Cycle Logistician (PMT LCL)*, *PM Lead LCL*, and *Strategic Business Team LCL*.
- The Army uses a variety of titles, including *Deputy Program Manager for Logistics (DPML)*, *Associate Program Manager for Logistics (APML)*, *Executive Director for Logistics*, *Associate Director for Logistics*, and *Logistics Division Chief*.

ENCOURAGES DEVELOPMENT OF APPROPRIATELY RIGOROUS, TARGETED TRAINING

DoD *Life Cycle Logistics (LCL)* training provided by the Defense Acquisition University (DAU), while robust and competency-based, is not specifically tailored for, or directly targeted at, the executive level and/or senior logistician in a program office. This inevitably leads to the question of whether an individual with Level III LCL certification has received sufficient training, has mastered the requisite competencies, or has demonstrated proficiencies required for success as a PSM.

FURTHER INTEGRATES ACQUISITION AND SUSTAINMENT

The ultimate “goal is to ensure sustainment considerations are integrated into all planning, implementation, management, and oversight activities associated with the acquisition, development, production, fielding, support, and disposal of a system across its life cycle” (DoD, 2009c, p. 5). This is critical, since at the end of the day, the PSM is the individual who will be tasked to “carry that ball across the goal line” on behalf of the PM.

Implications and Intent

In adopting the Section 805 language, the House and Senate conferees were extraordinarily clear in articulating their intent, specifically emphasizing the following provisions (NDAA, 2009b, p. 779):

- “Product support encompasses all critical functions related to weapon-system readiness, including materiel management, distribution, technical data management, maintenance, training, cataloging, configuration management, engineering support, repair parts management, failure reporting and analyses, and reliability growth.
- Included within logistics and sustainment functions are the tasks normally performed as part of the logistics support required for a major weapon system that are designed to focus on such metrics as readiness, reliability, availability, mean down time, customer wait time, footprint reduction, and reduced ownership costs....
- In implementation of this provision, the positions of product support manager, assistant program manager for logistics, deputy program manager for logistics, and system support manager shall be considered synonymous....
- The product support manager is a separate position from the program manager with distinct responsibilities” and “each such position [shall] be performed by a properly qualified member of the armed forces or full-time employee of the Department of Defense.”
- By passing this language, they “in no way intend to limit DoD from establishing product support managers and comprehensive product support strategies for other acquisition programs that are not designated major weapon systems.”

What Does This Actually Mean?

Product support, also referred to as system sustainment, is the package of support functions required to maintain the readiness and operational capability of weapon systems, subsystems, software, and support systems. (DoD, 2009b, p. 7)

The nine imperatives covered in the following discussion constitute the author's view of what the FY2010 NDAA legislation means to the life cycle logistician and industry counterparts:

IT'S ALL ABOUT THE WARFIGHTER AND NATIONAL SECURITY

President Obama, signed the FY2010 NDAA into law on October 28, 2009, containing language that stated, "Our defense budget isn't about politics, it's about the security of our country, and who knows that every dollar wasted is a dollar we can't spend to care for our troops or protect the homeland." Ultimately, the 2010 NDAA is all about supporting the warfighter and ensuring our national security—something formal establishment of a PSM helps to achieve.

PRODUCT SUPPORT APPLICATION BROADER THAN LOGISTICS

Clearly, product support, while primarily a logistics and sustainment function, is not actually synonymous with logistics. Indeed, product support "encompasses materiel management, distribution, technical data management, maintenance, training, cataloging, configuration management, engineering support, repair parts management, failure reporting and analysis, and reliability growth" (DoD, 2009b, p. 7). Product support (and LCM for that matter) is therefore truly a "team sport," requiring involvement, engagement, resources, expertise, and support from across the acquisition and sustainment domains, including from program managers, contracting officers, systems engineers, business and financial managers, and logisticians of varying backgrounds, including, of course, life cycle logisticians.

ENHANCED LIFE CYCLE MANAGEMENT

LCM is an essential element in minimizing life-cycle costs and maximizing weapon system performance and availability, a point repeatedly emphasized in DoD acquisition guidance. Establishing a PSM to assist in carrying this out enhances prospects for successfully achieving true LCM outcomes, while providing for greater flexibility in determining long-term product support and sustainment resourcing requirements, and establishment of subsequent resourcing decisions. "Maintaining flexibility

for long-term product support strategies is a key ingredient of the new statute” (R. Fowler, personal communication, November 30, 2009).

APPLICABILITY TO MAJOR WEAPON SYSTEMS

Words matter. The decision to use the term “Major Weapon System” in the statute has several advantages over mandating a PSM requirement solely for Major Defense Acquisition Programs (MDAP) (see Figure 4 for statutory versus DoDI 5000.02 differences in definitions). First, it ensures PSMs will be assigned to MDAPs, but does not limit the positions only to those programs, thus ensuring PSMs can be assigned to other programs not meeting MDAP designation dollar thresholds. Second, it communicates the intent that the position of PSM and its inherent responsibilities are for the life of the program, and do not culminate at system fielding. Third, once trained, this broader pool of experienced personnel capable of serving in a PSM capacity affords the Services greater flexibility in hiring the right individuals to serve as PSMs in the critically important, highly visible MDAPs.

BETTER MANAGED WEAPON SYSTEM SUPPORT

An *Aviation Week* feature article (Tegtmeier, 2009) highlighted the coming shift in military sustainment support. Section 805 of the bill fundamentally changes the way industry and government manage major weapon system support, according to Lynn Williams, a staff member of the House Armed Services Committee. Section 805 of the bill fundamentally shifts high-level aftermarket responsibility to the government and takes over some resource allocation from private industry. It also requires that each major weapon system be supported by a product support manager who is a member of the armed services or a full-time employee of the Defense Department. By considering sustainment requirements in early acquisition discussions, Williams believes, as do so many others, that product support costs should actually decrease (Tegtmeier, 2009).

ENHANCED CREDIBILITY OF PBL AS A WEAPON SYSTEM PRODUCT SUPPORT STRATEGY

The PSM will play a key role in implementation of PBL and assembling the team charged with developing and executing that product support strategy. Both the Navy (J. Heron, personal communication, December 7, 2009) and the Army, for example, recognized this well before the legislation was signed, the latter stating, “a PBL team should be formed to manage the PBL effort. The team, led by the PM or the PM’s designated product support manager (PSM), shall consist of government and private-sector functional experts and shall include all appropriate stakeholders, including warfighter representatives” (Department of the Army, 2009, pp. 20-21).

GOVERNMENT AND INDUSTRY ROLES CLARIFIED

Although both the June 2009 *Defense Acquisition Guidebook* and the March 2005 *Performance Based Logistics: A Program Manager's Product Support Guide* address both the PSM and PSI, as guidebooks they lack the authority of either policy or statute. Even so, many misconceptions about PSI and PSM organizations and responsibilities persist. "What [Congress] is trying to do is clarify...that we have an inherently governmental function; it is performed by this product support manager; and here are the elements of that function" (Munoz, 2009). Section 805 reiterates that the PSM position is an inherently governmental role. The PSM therefore directly supports the PM and retains oversight of PBL implementation. The PSI, on the other hand, can come from both government and industry, and supports both the PM and PSM by integrating (and in some cases providing) sources of product support.

PM-PSM RELATIONSHIP BETTER UNDERSTOOD

PMs are responsible for "ensuring product support integration as a continuous and collaborative set of activities that establish and maintain readiness and the operational capability of a system, subsystem, or end-item throughout its life cycle" (Department of the Air Force, 2009b, p. 50). Moreover, "the PM shall ensure that integrated logistics support objectives are considered and introduced as early as practical with a far-reaching life cycle view concerning logistics design and supportability of the system" (Department of the Air Force, 2009b, p. 113). Although the PM is ultimately accountable for LCM of the system, the senior program logistician, among others in a program office, is responsible for development of long-term support and sustainment planning. The PSM, like all life cycle logisticians, is charged with "translating warfighter performance requirements into tailored product support spanning the system life cycle" (DAU, 2009, p. 76). To achieve this, the PSM must be a strong proponent of LCM principles, objectives, and implementation, articulating the importance of long-term product support considerations as design trade-offs are made during system development. The synergy, collaboration, and integration required between the PSM and the PM in terms of successfully executing LCM and product support responsibilities are unmistakable.

CLEARLY ARTICULATED EXPECTATIONS

DoD defines LCL as "the ability to plan, develop, implement, and manage comprehensive, affordable, and effective systems support strategies...encompass(ing) the entire system's life cycle, including acquisition (design, develop, test, produce, and deploy), sustainment (operations and support), and disposal" (DoD, 2008b, p. 16). The similarities

to the expectations outlined by Congress in the FY2010 NDAA and by DoD in the November 2009 Product Support Assessment report for the PSM are clear, and as would reasonably be expected, not coincidental. PSMs, by and large, will be drawn from among the best, brightest, and most expert life cycle logisticians in the department. The key is to ensure they are trained, equipped, and have the resources, tools, and fortitude to successfully address the challenges, responsibilities, and expectations levied upon them.

Recommendations

Reformed [product support] stewardship—driven by improving product support and achieving more cost-effective weapon system readiness outcomes—requires a life-cycle management focus, committed leadership, and cooperative efforts from the operational, acquisition, and logistics communities. (DoD, 2009b, p. 3)

Thus far, this article has outlined the intent, importance, and implications of the Section 805 provisions of the FY2010 NDAA legislation regarding LCM and product support. Developing the implementation policy is the responsibility of the Office of the Secretary of Defense, while implementation of the provisions of that policy is the responsibility of Components and their materiel, systems, and/or logistics commands; however, the following recommendations are provided from the author's perspective as a career logistician, to facilitate PSM policy implementation and offer some thoughts on things it will take in the areas of LCM and product support to more effectively support and sustain the weapon systems with which we defend our nation.

RECOMMENDATION NO. 1: DoD POLICY CONSIDERATIONS

Section 805 requires the Secretary of Defense, specifically the Office of the Under Secretary of Defense (Acquisition, Technology & Logistics), to issue comprehensive LCM guidance and develop product support strategies within 180 days after enactment. As part of this policy, DoD should consider:

Updating DoDD 5000.01, DoDI 5000.02, the Defense Acquisition Guidebook, and Performance Based Logistics: A Program Manager's Product Support Guide to encapsulate PSM roles, responsibilities, and relationship to the PM. This guidance should also include additional tools, resources, and guidance to support the PSM in performing duties, including creation of a new Enclosure 13 to DoDI 5000.02 to address many of the recommendations from the Product Support Assessment report. Several to consider include establishing Sustainment Readiness Levels (SRL) akin to existing Technology Readiness Levels, mandating standardized Independent Logistics Assessments

(ILA) at regular intervals in a program life cycle, and ensuring regular post-fielding program reviews and evaluation of sustainment funding, readiness, and sustainment outcome metric achievement.

PSM location and reporting chain. Ideally the PSM would be assigned to the program office and report directly to the program manager. Although in some instances it may be more advantageous to have the PSM collocated with a depot, logistics command/center, or field support activity (authorized by DoDI 5000.02) (DoD, 2008a, p. 72), ensuring strategic PM-PSM alignment and linkage of long-term product support objectives, direction, and strategy development are imperative, and would be best enabled by a direct reporting chain to the PM, regardless of location.

RECOMMENDATION NO. 2: ESTABLISH RIGOROUS REQUIREMENTS FOR PSM SELECTION

To ensure only the most qualified personnel are selected by the military services to serve as PSMs, update the December 21, 2005, issuance of DoDI 5000.66, *Operation of the Defense Acquisition, Technology, and Logistics Workforce Education, Training, and Career Development Program* (DoD, 2005, p. 3) to:

- Designate the PSM position as both a Critical Acquisition Position (CAP) and a Key Leadership Position (KLP) for all major weapon systems, including Major Defense Acquisition Programs/Major Automated Information Systems (MDAP/MAIS) to reflect the new statutory authority given in the FY2010 NDAA.
- Add the PSM as a position that should be considered for designation as a KLP for significant non-MDAPs, recognizing the key role the PSM plays in executing LCM and program sustainment across the system life cycle.
- Identify specific and rigorous experience, training, and education requirements that go beyond existing requirements for Level III LCL certification. In addition to other DoDI 5000.66 CAP/KLP requirements, these should include:
 - At least 8 years' acquisition experience, which includes at least 6 years in LCL, with at least 2 years in a program office or similar organization.
 - Level III certification in LCL.

RECOMMENDATION NO. 3: EXPAND OPPORTUNITIES FOR MILITARY PERSONNEL TO SERVE AS PSM

Undertake initiatives to expand the number of uniformed military personnel in the LCL career field to ensure a pipeline of talented, experienced, trained, and certified personnel possessing both acquisition and operational backgrounds is available to fill key PSM positions, along with their civilian counterparts. According to DoD Instruction 5000.66, the Under Secretary of Defense (Acquisition, Technology & Logistics) shall “identify appropriate career paths for civilian *and military personnel* [emphasis added] in the AT&L Workforce in terms of education, training, experience, and assignments necessary for career progression to the most senior AT&L positions” (DoD, 2005, p. 4). Moreover, the instruction goes on to task the heads of DoD Components (acting through their Component Acquisition Executives) to not only “provide opportunities for both civilian and *military members* [emphasis added] of the AT&L Workforce to acquire the education, training, and experience necessary to qualify for senior positions” (DoD, 2005, p. 4), but also to “assign military officers to provide a balance between career-broadening experience and sufficient time in each position to ensure accountability, responsibility, and stability” (DoD, 2009b, p. 68). Regrettably, only 931 military personnel are assigned to DoD LCL positions, representing just 6 percent of the coded positions in the career field (Figure 5). Of these, none come from the Army or the Fourth Estate (Defense Agencies), and a total of just 64 military personnel are currently certified at Level III. Ensuring a sufficiently robust pool of experienced, talented, trained, and operationally experienced uniformed military personnel to complement their civilian counterparts will go a long way toward ensuring the success of the PSM requirement.

RECOMMENDATION NO. 4: IMPLEMENT DoD PRODUCT SUPPORT ASSESSMENT HUMAN CAPITAL RECOMMENDATIONS

DoD should aggressively implement key recommendations contained in the November 2009 DoD Product Support Assessment report in order to provide the PSM, the PM, the DoD Components, and the department the ability to successfully achieve congressionally mandated Section 805 requirements, and in the process, increase competition, enhance performance based life-cycle product support, reduce life-cycle costs, and improve weapon system performance outcomes. Development of more robust analytical tools, policies, and processes for performing business case analyses, better oversight of operations and sustainment costs, and expanding public-private partnering are all strategic initiatives, among many others, which complement Section 805 direction. This would also include aligning human capital report recommendations with PSM roles, responsibilities, and authority to “identify new or modified product support

**FIGURE 5. AT&L LIFE CYCLE LOGISTICS FUNCTIONAL AREA AS
OF DECEMBER 31, 2009**

Career Level Achieved	Workforce Category	Army	Navy	Air Force	4th Estate	Total
Level I	Civilian	1,901	745	348	12	3,006
	Military	-	114	104	-	218
Subtotal		1,901	859	452	12	3,224
Level II	Civilian	1,560	1,169	466	29	3,224
	Military	-	57	40	-	97
Subtotal		1,560	1,226	506	29	3,321
Level III	Civilian	2,214	1,553	261	61	4,089
	Military	-	56	8	-	64
Subtotal		2,214	1,609	269	61	4,153
No Level Achieved/ Unknown	Civilian	2,637	966	465	20	4,088
	Military	-	237	315	-	552
Subtotal		2,637	1,203	780	20	4,640
Totals		8,312	4,897	2,007	122	15,338

(Source: AT&L Workforce Data Mart)

competencies and proficiencies driven by proposed (product support assessment) strategy, policy, and process changes” and to “incorporate new or modified product support competencies into DoD and industry logistics, and acquisition workforce career field training, recruitment, and retention strategies” (DoD, 2009b, p. 69), including:

- Focusing on enhancing professional development, including greater emphasis on the seven key life cycle logistics competencies outlined in the May 2008 DoD Logistics Human Capital Strategy (Logistics Design Influence, Integrated Logistics Support Planning, Product Support & Sustainment, Configuration Management, Reliability & Maintainability Analysis, Technical/Product Data Management, and Supportability Analysis) (DoD, 2008b, p. 4) and underlying proficiencies, which serve as the building blocks for each competency.
- Developing highly capable, highly effective PSMs with a truly strategic, enterprise-level perspective. Such individuals would possess the experience of what the DoD Logistics Human Capital Strategy terms a “multi- faceted logistician with expertise in many segments and knowledge of the logistics process end-to-end; knowledge of business or

other fields; executive training; and multi-component experience” (DoD, 2008b, p. 4).

- Establishing more rigorous, competency-based defense acquisition workforce certification training, including new DAU courses focusing on RAM, supportability analysis, technical data/product data management, and expanded performance based life-cycle product support and sustainment courseware to strengthen preparation of future PSMs during their acquisition professional development.
- Identifying executive-level PSM competencies and development of 400-level training for PSMs comparable to existing PMT 401 and PMT 402 training currently available for senior program managers. Moreover, because product support is broader than LCL, this would entail going beyond a logistics audience and identifying executive-level product support competencies and training for other acquisition functional career fields.

RECOMMENDATION NO. 5: ALIGN EXISTING POLICY WITH NEW STATUTORY REQUIREMENTS

First and foremost, DoD Section 805 implementation guidance will need to address a variety of LCM enablers related to competition, best value determination, resource allocation, business case analysis, strengthening outcome-based product support implementation, long-term sustainment oversight, and of course, PSM roles, responsibilities, and authority. In addition, with codification of the PSM position into law, Service-specific guidance such as direction contained in Air Force Instruction 61-101, “identify a *product support integrator* as a single point of contact prior to program initiation” and “the product support integrator will be military or government civilian personnel unless otherwise approved and documented as part of program planning” (Department of the Air Force, 2009b, p. 113) should be revised to reflect the fact that the PSM must be either military or a government civilian, and at the same time, PSI responsibilities under a PBL arrangement can be performed by either a governmental or industry organization. Section 805 of the FY2010 NDAA clearly states “the term ‘product support integrator’ means an entity within the Federal Government *or outside the Federal Government* [emphasis added] charged with integrating...sources of product support, both private and public, defined within the scope of a product support arrangement” (NDAA, 2009a).

Conclusions

Planning for Operations and Support and the estimation of total ownership costs shall begin as early as possible. Supportability, a key component of performance, shall be considered throughout the system life cycle. (DoD, 2007, p. 10)

DoD is at a critical juncture. Supporting and sustaining increasingly complex, often aging weapon systems in an era of budgetary austerity, and faced with a variety of threats and challenges from both state and non-state actors, the department must leverage LCM processes, practices, and policies, coupled with performance based life-cycle product support sustainment strategies to preclude degraded readiness and upward spiraling support costs. By including Section 805 in the FY2010 NDAA, Congress has made it clear where it stands on these issues, and who is responsible for addressing them. “The true decision-making authority lies with the product support managers, who determine ‘allocation decisions, strategy decisions, doing the business case analysis to determine the best approach for sustaining the weapons system’” (Munoz, 2009).

The confluence in recent months of formal statutory recognition of the PSM, issuance of a DoD Logistics Human Capital Strategy capturing the vision and required competencies, recognition by the department that performance based logistics strategies must be strengthened and broadened to more effectively inculcate product support (of which logistics is an important, but by no means exclusive subset), and issuance of a year-long DoD Product Support Assessment report all point to the same desired outcome: genuine LCM, which delivers sustained long-term weapon system readiness while optimizing life-cycle costs. The stars are aligned for product support success like never before.

Author Biography

Professor Bill Kobren is the Defense Acquisition University Logistics and Sustainment Center director. He is responsible for DAU logistics courseware and serves as Life Cycle Logistics Functional Integrated Process Team executive secretary. He is Level III certified in life cycle logistics, is a certified professional logistician, and is a 2009 Distinguished Graduate of the Industrial College of the Armed Forces, with a master's in National Resource Strategy. Professor Kobren is also supporting the Office of the Secretary of Defense in implementing November 2009 DoD Product Support Assessment Report recommendations.

(E-mail: Bill.Kobren@dau.mil)

REFERENCES

- Defense Acquisition University. (n.d.). DoD AT&L Data Mart [secure Web page]. Retrieved November 30, 2009, from <http://www.dau.mil> (downloaded from a secure Web site accessible only from servers within the Defense Acquisition University by authorized DoD Common Access Card holders).
- Defense Acquisition University. (2005). *Performance based logistics: A program manager's product support guide*. Retrieved November 12, 2009, from <https://acc.dau.mil/CommunityBrowser.aspx?id=32536>
- Defense Acquisition University. (2009). *Defense Acquisition University (DAU) 2010 catalog*. Retrieved November 12, 2009, from http://icatalog.dau.mil/onlinecatalog/Archived_Catalogs.asp
- Department of Defense. (1998). *Secretary of defense report to congress: Actions to accelerate the movement to the new workforce vision*. Retrieved November 13, 2009, from <http://www.dod.mil/pubs/foi/NewWorkForce.html>
- Department of Defense. (2005). *Operation of the defense acquisition, technology, and logistics workforce education, training, and career development program*. DoDI 5000.66. Retrieved November 13, 2009, from <http://www.dtic.mil/whs/directives/corres/pdf/500066p.pdf>
- Department of Defense. (2007). *The defense acquisition system*. DoD Directive 5000.01. Retrieved November 12, 2009, from <http://www.dtic.mil/whs/directives/corres/pdf/500001p.pdf>
- Department of Defense. (2008a). *Operation of the defense acquisition system*. DoD Instruction 5000.02. Retrieved November 12, 2009, from <http://www.dtic.mil/whs/directives/corres/pdf/500002p.pdf>
- Department of Defense. (2008b). *DoD logistics human capital strategy*. Retrieved November 12, 2009, from <http://www.acq.osd.mil/log/sci/hcs.html>
- Department of Defense. (2009a). *Implementation of the Weapon Systems Acquisition Reform Act (WSARA) of 2009 (Pub. L. 111-23)*. Directive-Type Memorandum (DTM) 09-02. Retrieved November 13, 2009, from <https://acc.dau.mil/CommunityBrowser.aspx?id=336128&lang=en-US>
- Department of Defense. (2009b). *DoD weapon system acquisition reform: Product support assessment*. Retrieved November 12, 2009, from <https://acc.dau.mil/CommunityBrowser.aspx?id=328610&lang=en-US>
- Department of Defense. (2009c). *Defense acquisition guidebook (DAG)*. Retrieved November 12, 2009, from <https://acc.dau.mil/dag>
- Department of Defense. (2010, February). *Quadrennial defense review (QDR) report*. Retrieved February 2, 2010, from <http://www.defense.gov/QDR/QDR%20as%20of%2029JAN10%201600.pdf>
- Department of the Air Force. (2009a). *Guide to acquisition and sustainment life cycle management*. Air Force Pamphlet (AFPAM) 63-128. Retrieved November 12, 2009, from <http://www.e-publishing.af.mil/shared/media/epubs/AFPAM63-128.pdf>
- Department of the Air Force. (2009b). *Acquisition and sustainment life cycle management*. Air Force Instruction (AFI) 63-101. Retrieved November 12, 2009, from <http://www.e-publishing.af.mil/shared/media/epubs/AFI63-101.pdf>
- Department of the Army. (2009). *Integrated logistics support*. Army Regulation (AR) 700-127. Retrieved November 13, 2009, from http://www.army.mil/usapa/epubs/pdf/r700_127.pdf
- Fowler, R. (2009a, October 27). *Product support integrators—partnerships, risk and reward sharing*. Assistant Deputy Under Secretary of Defense for Materiel Readiness presentation to the 2009 Department of Defense Maintenance Symposium & Exhibition, Phoenix, AZ. Retrieved November 12, 2009, from <http://www.sae.org/events/dod/presentations/2009/plrandyfowler.pdf>

- Fowler, R. (2009b, December). *DoD Logistics Focus: Life Cycle Management & Product Support*. Poster session presented in the Defense Acquisition University ACQ 404 Senior Acquisition Manager Course (SAMC), Fort Belvoir, VA.
- Munoz, C. (2009, October 15). Congress expands role of product support managers in MDAPs. *Insider*. Retrieved November 12, 2009, from <http://defensenewsstand.com/insider.asp?issue=10152009sp>
- National Defense Authorization Act (NDAA) for Fiscal Year 2010, Pub. L. No. 111-84, § 805, H.R. 2647. (2009a). Retrieved November 13, 2009, from http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h2647enr.txt.pdf
- National Defense Authorization Act (NDAA) for Fiscal Year 2010, Pub. L. No. 111-288, § 805, H.R. 2647, Conference Report No. 111-288. (2009b). Retrieved November 13, 2009, from http://www.thomas.gov/cgi-bin/cpquery/?&dbname=cp111&sid=cp111q4Kjj&refer=&r_n=h288.111&item=&sel=TOC_3704954&
- Tegtmeier, L. A. (2009, October 28). Shift coming in military sustainment support. *Aviation Week & Space Technology*. Retrieved November 13, 2009, from http://www.aviationweek.com/aw/generic/story_generic.jsp?channel=aerospacedaily&id=news/SUSTAIN102809.xml&headline=Shift%20Coming%20In%20Military%20Sustainment%20Support